The Manager
Regulatory Development Section
FCC
20 February 2013

SUBJECT; Response to the Federal Communications Commission FCC 12-148, for the Amendment of the Commission's Rules with Regard to Commercial Operations in the 3550-3650 MHz Band GN Docket No. 12-354

Dear Madam, dear Sir,

SITA, the world's leading specialist in air transport communications and IT solutions, welcomes the opportunity to respond to the discussion paper published by the Federal Communications Commission (FCC) regarding the amendment of the Commission's Rules with regard to commercial operations in the 3550-3650 MHz Band GN Docket No. 12-354.

SITA is highly in favor of the FCC proposal to amend the commercial operations in the 3550 – 3650 MHz band to allow the creation of low power, small cell, campus wide solutions with the option of non interference rights to the spectrum.

SITA has been providing mission critical communications to the Air Transport Industry (ATI) for more than 60 years (1949). In discussions with many airports around the world, including airline and ground handling staff, a major factor slowing the deployment of time saving mobile applications is poor connectivity between application servers and mobile devices. Current mission critical radio systems are limited in both bandwidth and data capabilities.

Developments in technology, industry adoption of increased mobile technology and the demands of the ATI to exploit this development have led to demand for higher bandwidth and guaranteed access. A campus-like solution with dedicated licensing will help SITA provide more services to its ATI Members/customers in a more efficient manner. Furthermore, the proliferation of LTE (Long Term Evolution) technologies and the specification of low power small cells provide the ability to offer campus wide solutions with limited reach in coverage, reducing the interference to neighboring areas.

SITA responds favorably to the proposals set out by the FCC and would welcome further discussion on how the proposed interference controls can be effectively implemented.

Yours sincerely,

Bryan P. Crowell
Head of Regulatory Affairs

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SITA response to the FCC discussion paper on the proposal to amend the commission rules with regard to commercial operations in the 3550-3650 MHz band GN docket no. 12-354

I. INTRODUCTION

SITA is the world's leading specialist in air transport communications and IT solutions. SITA delivers and manages business solutions for airline, airport, travel agents, and governmental customers (INGO's) over the world's most extensive network, which forms the communications backbone of the global air transport industry. Created in 1949 and owned by the air transport community, SITA is the community's dedicated partner for information and communications technology. SITA has brought many innovations to the air transport marketplace and innovates collaboratively with the air transport industry. The industry itself drives the company's portfolio and strategic direction.

II. COMMERCIAL DEMAND FOR MISSION CRITICAL WIRELESS CAMPUS ENVIRONMENTS

SITA has been providing mission critical communications to the ATI for more than 60 years (1949). In discussions with many airports around the world, including airline and ground handling staff, a major factor slowing the deployment of time saving mobile applications is poor connectivity between application servers and mobile devices. Current mission critical radio systems are limited in both bandwidth and data capabilities.

In the airport mobility world, higher speed connectivity is either provided by deploying WLAN networks or relies on 3G cellular provided by mobile network operators. Both of these technologies have their limitations in providing not only coverage, but the guaranteed access so essential in the busy airport environment. WiMax is another alternative technology option but currently seems to be lacking in support by the major global cellular carriers; raising questions as to its future. It is SITA's opinion that future wireless systems will be LTE based given the lower costs (due to reuse of consumer LTE technology), lower power (providing discrete cell coverage), and wider global adaptability envisaged with LTE.

III. POINTS RAISED IN THE NPRM

SITA responds to 4 key points raised in the NPRM consultation paper:

a) Creation of a new Citizens Broadband Service in the 3550-3650 MHz band (3.5 GHz Band)

SITA applauds the proposal to create a new Citizens Broadband Service in the 3550 – 3650 MHz band. Further, SITA agrees that this deployment should promote novel technologies for greater efficiency by allowing several "small cells" to be deployed enabling campus like solutions; SITA highlights that the technical developments in LTE by the global development group 3GPP enable low power solutions to be deployed which will enable small cell solution deployment while benefiting from mass market developments.

Using international technologies with defined emission characteristics will also enable further confidence in not causing harmful interference in adjacent frequency bands.

Further, by stipulating low power use from the base station, harmful interference will be kept to a minimum.

It is highlighted that the UK Ofcom consultation paper on LTE use for 2.6 GHz has defined low power operations as a 25dBm/5MHz EIRP. It is further highlighted that the NTIA's Fast Track Report, used 61 dBm power levels used in the interference studies carried out in its WiMax analysis. The interference produced by incorporating low power LTE cells will therefore be significantly less (approximately 4000 times less). Consequently, the impact proposed and limitations recommended in the NTIA report seem excessive when considering low power base station deployment.

b) Creation of spectrum access system (SAS) incorporating a dynamic database

While SITA understands and agrees with the need for such a mechanism, SITA asks the question, how will this be managed and how will it be used in case of interference issues arising from abuse? A dynamic database suggests an automated entry mechanism which may or may not be monitored, checked and/or evaluated. Further, SITA asks how the SAS would impose the use of certain technologies in certain locations.

c) Creation of a three tier license service of Incumbent Access, Priority Access and General Authorized Access.

The creation of a three tier license service will enable the harmonious coexistence of the current incumbents with new entries into the market. The structure of Priority Access over General Access will ensure that Priority Access users can expect the responsiveness necessary for more demanding applications; while the General Authorized Access tier could be used for non mission critical access. For example, on the airport campus, the saturation of networks by the general public on the arrival of 500 passengers from a Boeing 747 or Airbus A380 would not impact the communications layer for the professional user at the airport.

d) A license-by-rule approach for Incumbent Access, Priority Access and General Access

SITA agrees with the license-by-rule. Otherwise, SITA would ask how a guaranteed wireless access service can be provided. Today with WLAN access, the quality of access deteriorates as the number of access users grows. Further, given that it is shared spectrum, a campus location can get overrun by several WLAN access points all competing for the same spectral carrier. The result is all end users suffer with the networks applying the same value to those devices sending a "hello mum" message to those devices sending time critical information which could cause millions in damages if not delivered "in time".

However, SITA raises caution that a license-by-rule approach should not equate to inhibitive license fees as this will clearly stifle any developments toward innovative solutions incorporating limited coverage and limited user group campus solutions.

IV. CONCLUSION

In conclusion, SITA applauds the approach to open up the 3.5 GHz band for use by entities deploying small cells, which will share the spectrum with incumbents. To ensure maximum reuse, SITA would suggest that low power small cell be stipulated. SITA also agrees with the adoption of license by rule to ensure that Priority Access is not just "best effort" priority but it is sufficiently regulated to ensure mission critical access should that be required. Finally, SITA highlights some concerns on the SAS system and asks how enforcement of agreed frequency conditions will be met.

SITA

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